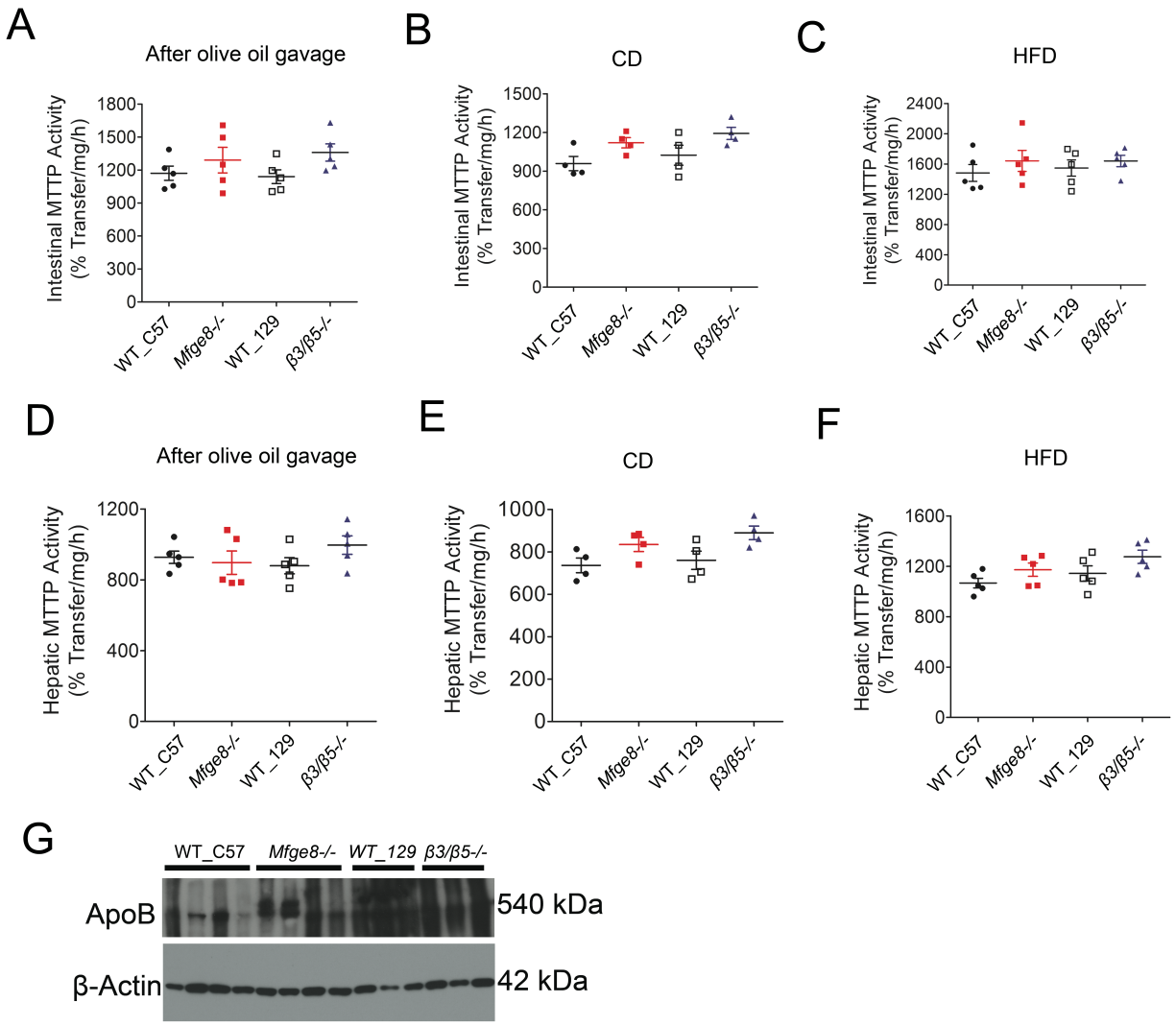
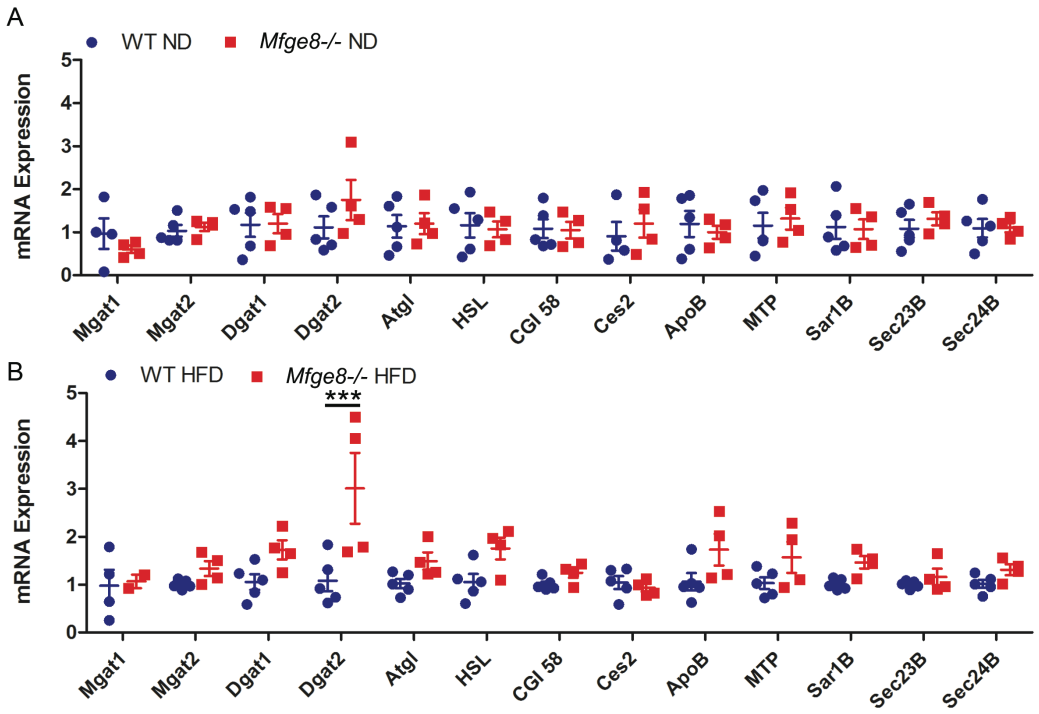
Supplemental figures:

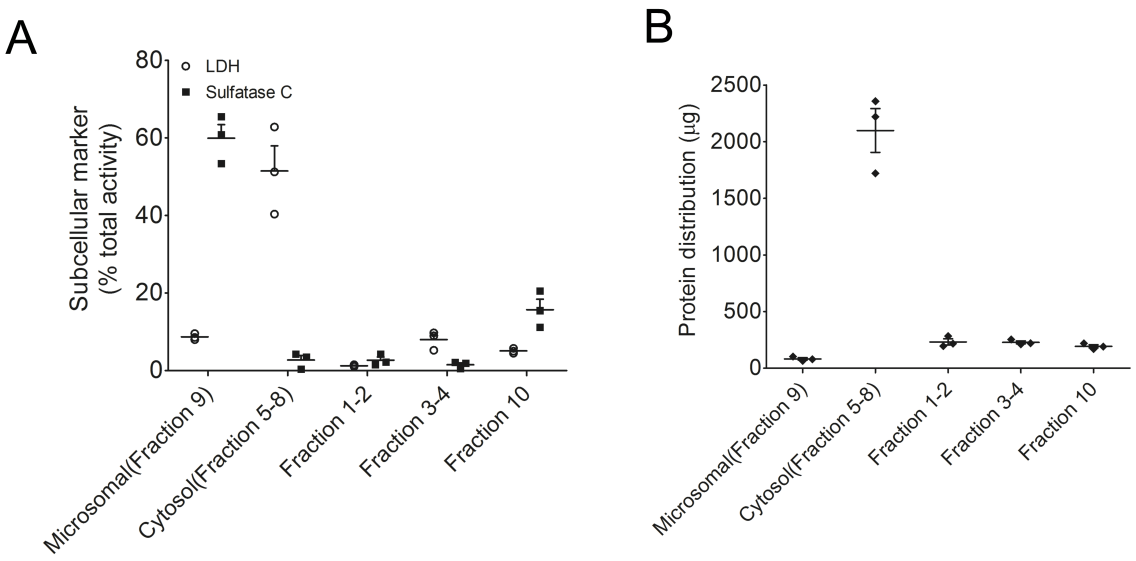


Supplemental Figure 1. MTTP activity and apolipoprotein B expression is unchanged in *Mfge8*$^{-/-}$ and *αvβ3/αvβ5*$^{-/-}$ mice. (A-F) MTTP activity in proximal jejunum (A-C) and liver (D-F) of mice 2 hours after 200 µl olive oil gavage (A,D), on a control diet (B,E) or after 4 weeks on a high fat diet (C,F). n = 4-5. (G) Apolipoprotein B expression in mice 2 hours after olive oil

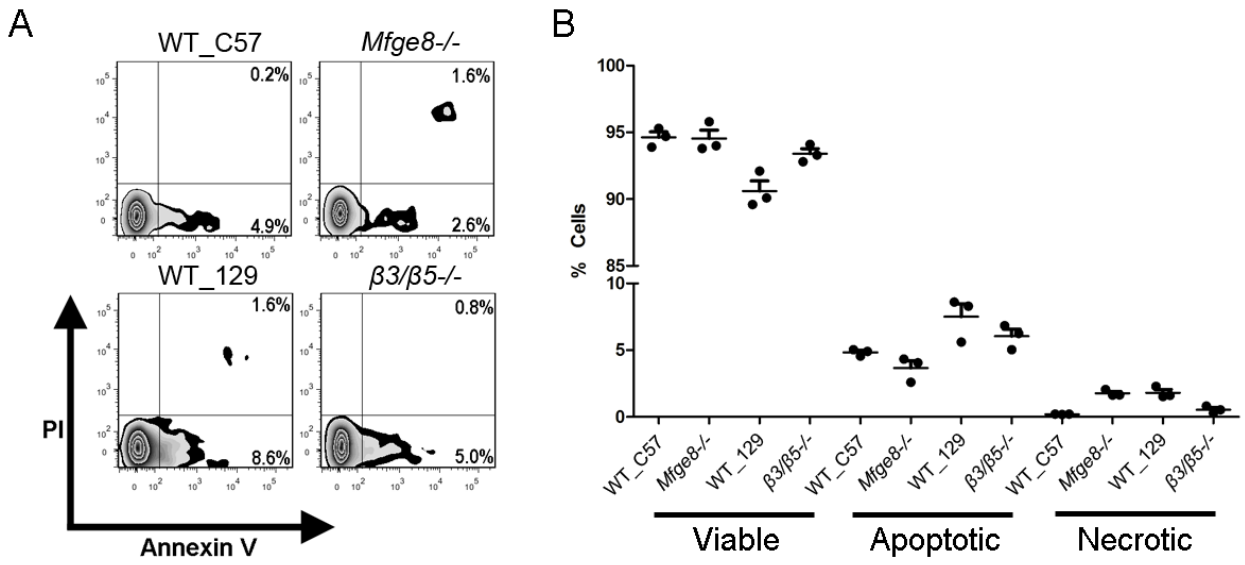
gavage. Data represent 3 independent experiments. Both female and male mice were used in all panels. Data were analyzed using a student's t-test and expressed as mean +/- SEM.



Supplemental Figure 2. quantitative RT-PCR data from WT and *Mfge8*$^{-/-}$ mice. *Mfge8*$^{-/-}$ and WT mice were kept on a control diet (A) and HFD (B) for two weeks. RNA were isolated from jejunum and evaluated for the expression of genes that are critical mediators of TG synthesis, hydrolysis, and secretion. Data is expressed as relative expression by comparative threshold method using 36B4 as the internal control. n = 4-5. Both female and male mice were used in all panels. Data were analyzed using a student's t-test and expressed as mean +/- SEM.



Supplemental Figure 3. Subcellular fractionation of cytosolic and microsomal compartments. (A, B) 2 hour after 14C tri-oleic acid gavage, primary enterocytes were isolated from the jejunal segment. After subcellular fractionation, activities of lactate dehydrogenase (LDH) and sulfatase C activity (A) were measured as a cytosolic and microsomal marker. (B) Protein content of each fraction was measured by micro BCA assay.



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37 **Supplemental Figure 4. Viability of primary enterocytes after isolation**. Primary enterocytes

38 were isolated and viability was assessed by staining with Annexin V and PI.

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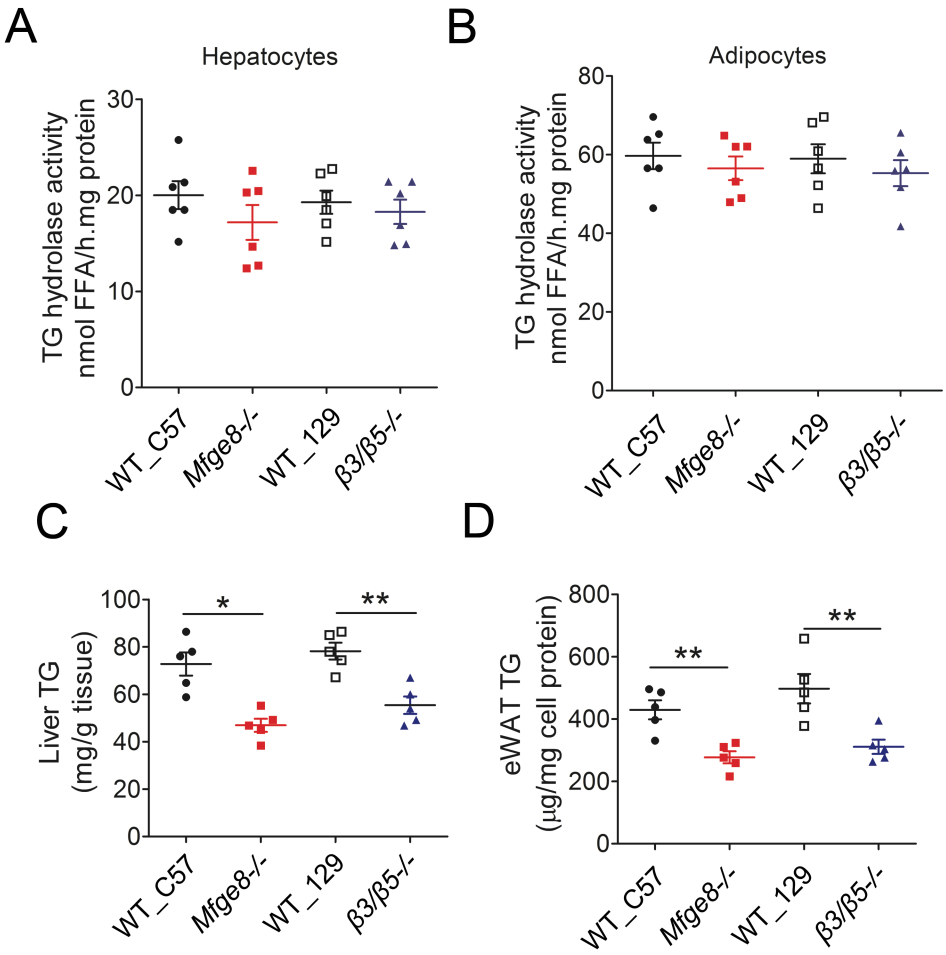

Supplemental Figure 5. Hepatic and adipocyte TG hydrolase activity is intact in *Mfge8*$^{-/-}$ and *αvβ3/αvβ5*$^{-/-}$ mice. (A-B) TG hydrolase activity in primary hepatocytes (A) and adipocytes (B) from *Mfge8*$^{-/-}$ and *αvβ3/αvβ5*$^{-/-}$ mice. (C-D)TG levels in liver (C) and white adipose tissue (eWAT) (D) after i.p. administration of 200 µL of olive oil and Intralipid 20% fat emulsion. n = 4-5. Both female and male mice were used in all panels. Data were analyzed using a student's t-test and expressed as mean +/- SEM.

Supplemental Figure 6. Primer pairs used for quantitative RT-PCR

Mgat1_F	CTGGTTCTGTTTCCCGTTGT	Ces2_F	GCTGAATGCTGGGTTCTTCG
Mgat1_R	TGGGTCAAGGCCATCTTAAC	Ces2_R	GCTGCCTTGGATCTGTCCTGT
Mgat2_F	AGGAGTGTCCTGGGTGTGAC	ApoB_F	GATCAGGCTTTGCCGCAATA
Mgat2_R	TGATATGCATCTCGGGTCAA	ApoB_R	CATCAGAGGAGAGGCCAATCC
Dgat1_F	CGTGGTATCCTGAATTGGTG	Mtp_F	TGAGCGGCTATACAAGCTCAC
Dgat1_R	GGATAGGATCCACCAGGATG	Mtp_R	CTGGAAGATGCTCTTCTCGC
Dgat2_F	TCTTCTGGACCCATCGGCCCCAGGA	Sar1b_F	GGGTGGGCACGTGCAA
Dgat2_R	AGTGGCAATGCTATCATCATCGT	Sar1b_R	TGCCATTGATAGCAGGAAGGT
ATGL_F	CCGCTGGAGAGTGCAGTGT	Sec23b_F	CCCTACGTCTTTCAGATTGTCA
ATGL_R	CACCGGATATCTTCAGGGACAT	Sec23b_R	CGGGCAAAATGGTGTCTATAA
Hsl_F	GGCTTACTGGGCACAGATACCT	Sec24b_F	GACCCGAGAAGGCGCTTT
Hsl_R	CTGAAGGCTCTGAGTTGCTCAA	Sec24b_R	TTTGCCAACCCAAATGTAGAAA
Cgi-58_F	GGTTAAGTCTAGTGCAGC		
Cgi-58_R	AAGCTGTCTCACCACTTG		